Sustainable Lands Strategy

Lower Skykomish River Reach-scale Plan

July 2017

Snohomish Basin Salmon Recovery Forum
August 3, 2017

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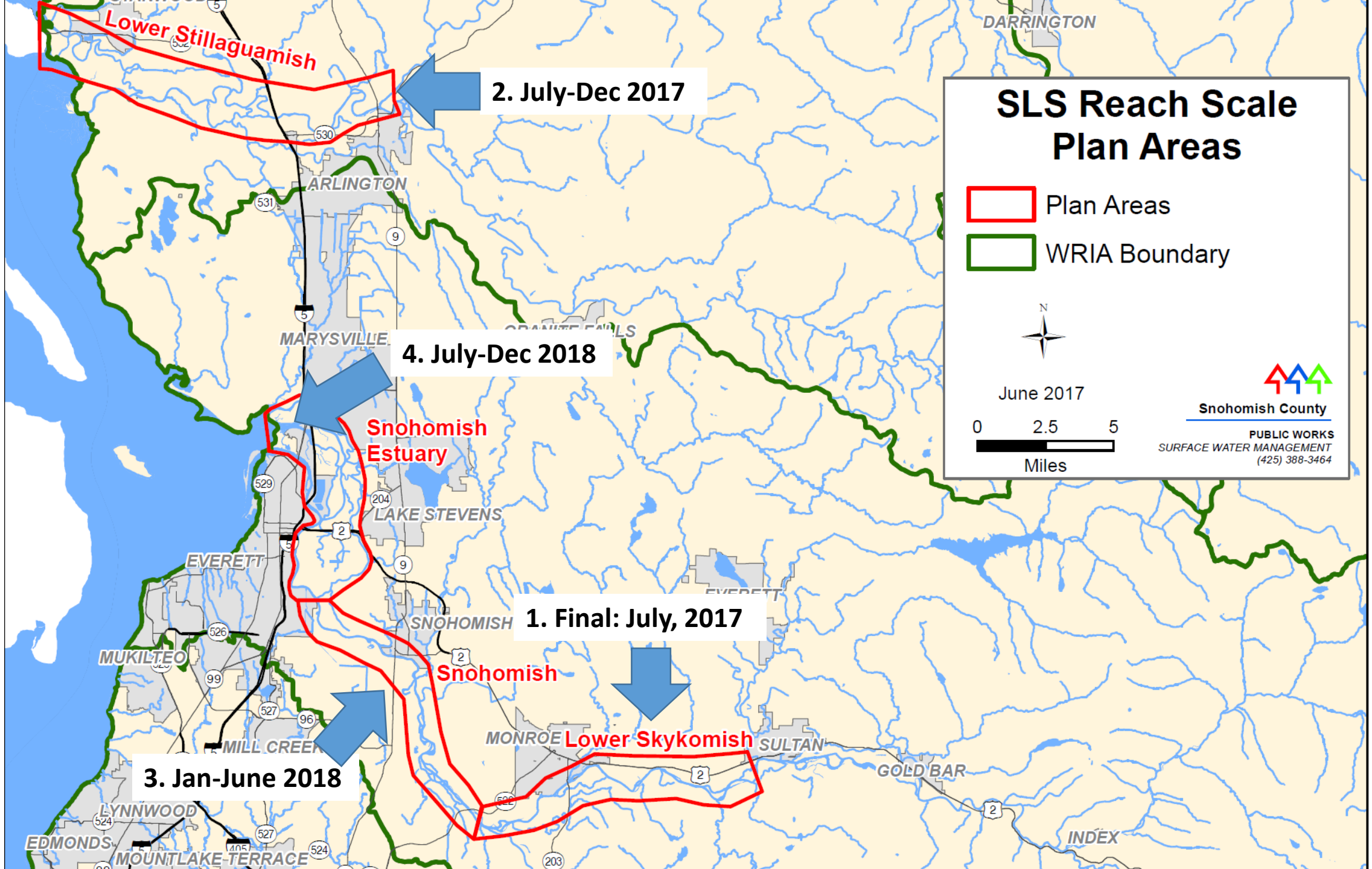
Special Projects Coordinator
Surface Water Management


SLS Reach Scale Plan Areas
Plan Areas
WRIA Boundary
N
June 2017
0
2.5
5
Miles
Snohomish County
PUBLIC WORKS
SURFACE WATER MANAGEMENT
(425) 388-3464
Lower Stillaguamish
2. July-Dec 2017
4. July-Dec 2018
Snohomish Estuary
1. Final: July, 2017
Snohomish
Lower Skykomish
3. Jan-June 2018
DARRINGTON
ARLINGTON
MARYSVILLE
LAKE STEVENS
EVERETT
SNOHOMISH
MUKILTEO
MILL CREEK
MONROE
SULTAN
GOLD BAR
INDEX
LYNNWOOD
EDMONDS
MOUNTLAKE TERRACE

Purpose of Lower Skykomish River Reach Plan

"Identify a coordinated set of multi-benefit projects that will,

when completed,

improve natural functions within the reach

while generating a **net gain** for farm, fish, and flood management interests."

What is Net Gain?

Net Gain for Agriculture

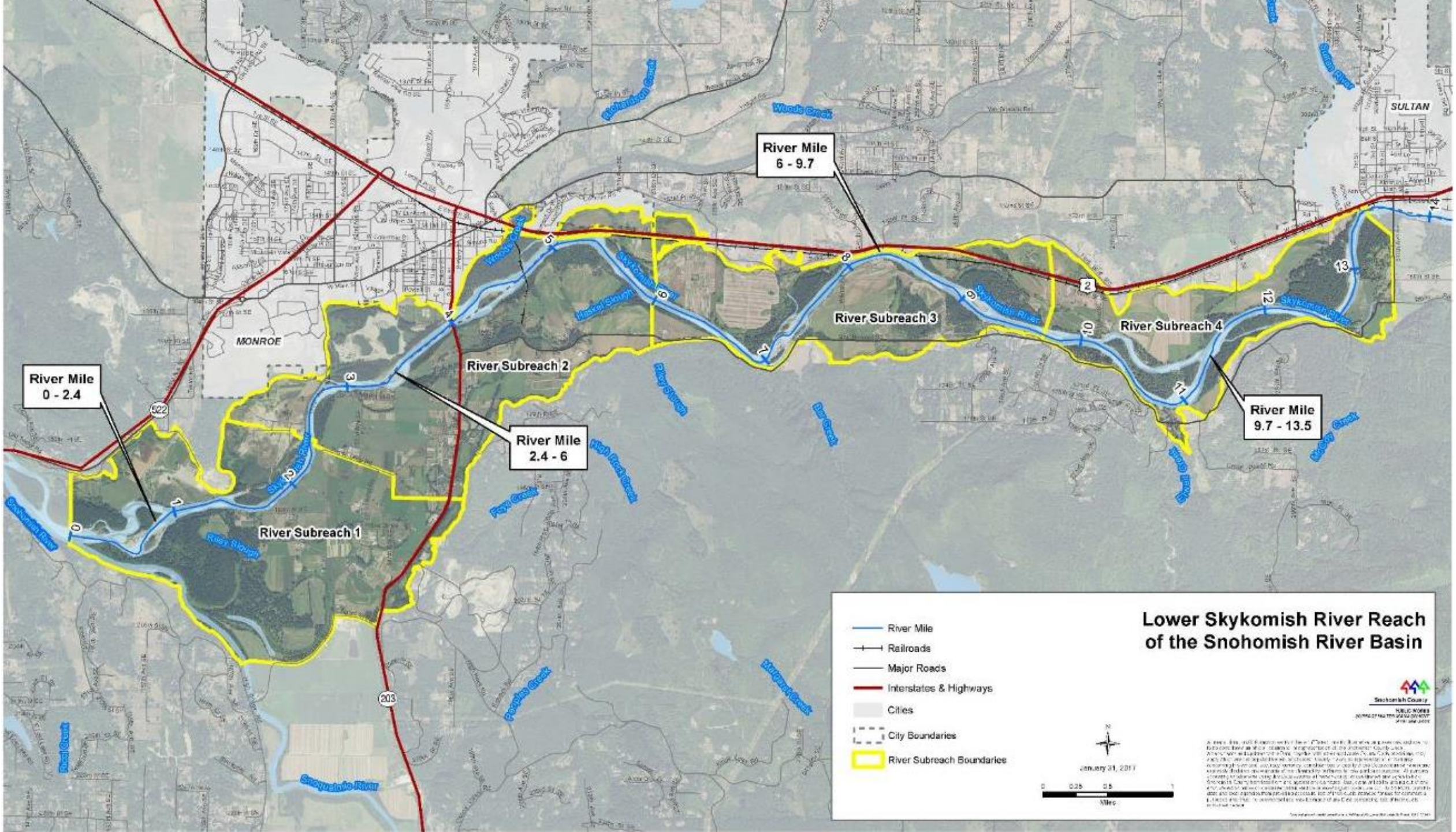
- Enhanced agricultural productivity and economic viability
- Flood damage reduction
- Ag resilience plan (climate change)
- Farmland protection & preservation (PDR, TDR)
  - Protect large blocks of contiguous ag land
- Regulatory certainty
- Infrastructure support

Net Gain for Fish/Environment

- Continued progress toward Salmon Plan targets
- Improvements in water quality, habitat
- Broad based community support for actions

Net Gain for Flood Risk Reduction

- Reduced flood risk for farms, residences and infrastructure in the floodplain



Lower Skykomish River Reach
of the Snohomish River Basin
River Mile
Railroads
Major Roads
Interstates & Highways
Cities
City Boundaries
River Subreach Boundaries
January 31, 2017
Miles
River Mile
0 - 2.4
River Mile
2.4 - 6
River Mile
6 - 9.7
River Mile
9.7 - 13.5
River Subreach 1
River Subreach 2
River Subreach 3
River Subreach 4
MONROE
SULTAN
Skykomish River
Woods Creek
Richardson Creek
Haskell Slough
Rivers Slough
Foye Creek
High Rock Creek
Bar Creek
Poopies Creek
Matthews Creek
Snoqualmie River
McCoy Creek
Sultan River
522
203
2

Chapter 1: Goals and Background of the Plan

Chapter 2: Conditions in the Lower Skykomish River Reach

- Geographic Overview
- Property ownership and land use
- Geomorphic conditions
- Hydrologic and hydraulic conditions and flood profile
- Water quality conditions

Chapter 3: Farm, fish and flood related considerations

3.1 Considerations for Agriculture

3.2 Considerations for Salmon Habitat and Water Quality

3.3 Considerations for Flood Risk Reduction

3.4 Actions and Approaches Beneficial to all Considerations

Chapter 4: Projects to address farm, fish and flood risk reduction

- 4.1 Progress in the Reach

  - projects that are completed, in progress, or planned for the reach (table 12)

- 4.3 Funding strategies and opportunities.

Table 12
Project Summary Table

Location (River Mile)	Project ID[2]	Project Name (and Original Name, if Applicable)[3]	Description	Status[4] (with HWS and PRISM links when available)	Benefits[1]		
					Farm	Fish	Flood
5.5	**LSky5**	**Reiner Farm Acquisition**	Conserve 200 acres of 260-acre farm with a conservation easement. The farm has some of Snohomish County's best farmland, 2 miles of riverfront along the Skykomish River, and a 200-foot buffer along the river to provide high quality wildlife habitat.	Active project. (PRISM #16-1358)	P	P	
Subreach 3 (RMs 6 – 9.7)							
6.1	**115**	**Fern Bluff side-channel improvements**	Improve access to the side channel behind Fern Bluff Levee. A small creek flows into side channel, probably accessible from downstream end. Connection at upstream end is unknown.	Not started. (HWS #07-MPR-160)	S	P	P
7.2	**LSky6**	**RM 7.2 left bank enhancement**	Improve edge conditions downstream of left bank off-channel habitat. Riparian planning and bank wood structures.	Not started.		P	
7.8	**116**	**RM 7.8 edge enhancement and instream structure** (Sky 2 rip/edge/off-channel A)	Improve access to off-channel habitat and restore the riparian forest along the left bank across from the Fern Bluff levee. A 20-foot riparian corridor was planted in the past, but current status is unknown.	Not started. (HWS #07-MPR-161)		P	
8.6	**117**	**RM 8.6 Off-channel reconnection** (Klock farm oxbow reconnection)	Oxbow channel reconnection on the left bank across the river and upstream of the Fern Bluff levee. Became an oxbow in 1950s. Isolated by a dike.	EPA and Department of Justice are pursuing restoration of unpermitted fill at downstream end of channel. (HWS #07-MPR-162)	S	P	P

SLS Web Map

Snohomish County GIS

Search...

Tools

Home | Identify | Initial View | Bookmarks | Print | Upload Data | Export | Distance

Basic Tools | Measure

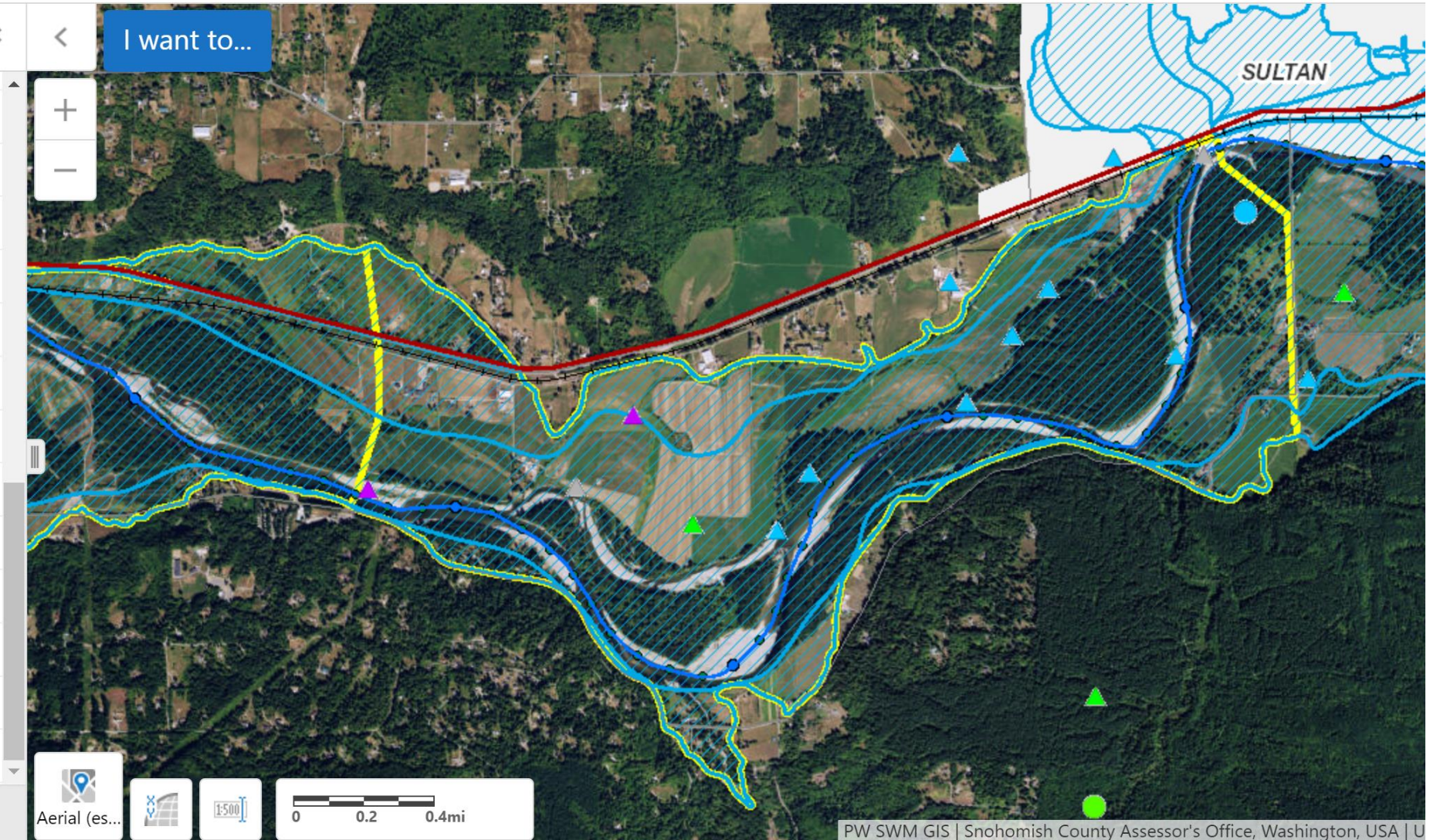
http://gismaps.snoco.org/slsmaps

Layers

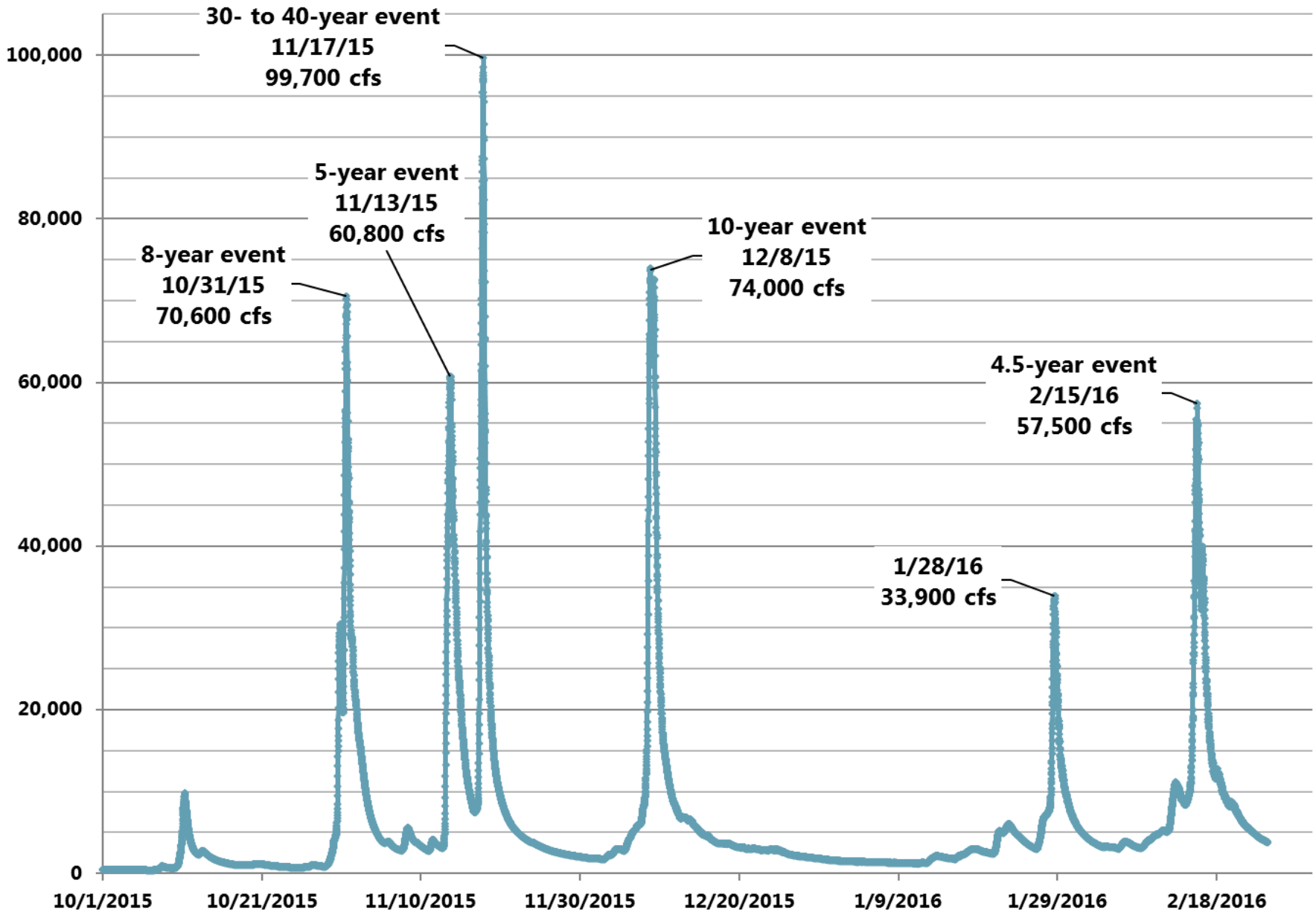
- 2003
- 2006
- 2007
- 2011
- WADOT
  - Major Roads
  - Railroads
- River Miles
  - Preliminary Specia...
  - 2015 WSDA Agricu...
  - Future Land Use D...
  - River Subreach
  - Cities

Home | Layers

I want to...



Hydrograph of Snohomish River at Gold Bar



Bank prior to 2015-16
high flows

Chapter 5: Measuring success

Tal

Desired Outcomes and Planning, Implementation, and Effectiveness Metrics

Desired Outcome	Metrics	Benefits[1]		
		Farm	Fish	Flood
Farmland Preservation				
Increase in acres of high-priority lands protected for future agricultural use	• Measured in acres of protected agricultural lands using strategies such as a TDR/PDR, agriculture conservation easements, zoning changes, land swaps, or other land use planning methods	P		
Increase in land actively farmed	• Measured in the change in acres in farms as reported in the USDA Census of Agriculture	P		
Maintain large blocks of agricultural lands	• Measured in the fragmentation of agricultural lands (conversion to other uses); permitting of residential construction and other uses that conflict with agricultural activity; and acres of conservation easements, and purchase/transfer of development rights on agricultural lands	P	S	S
Demonstration of farm-friendly habitat restoration practices, tools, and strategies	• Approval and implementation of SLS-recommended restoration projects. • Length of flood fencing installed • Acres of hedgerows, riparian buffers, and working buffers planted	P	S	S
Enhanced Agricultural Productivity				
Improved drainage and diking infrastructure	• Acres of agricultural land with improved drainage, miles of repaired/improved dikes, and other drainage improvements and infrastructure investments	P		P
Agricultural viability projects scoped, prioritized, and designed	• Measured by completion of an Agricultural Resilience Plan	P		
Flood Damage Reduction				
Flood damage reduction strategies incorporated into projects	• Acres of farmland protected from flood damage from bank erosion, post-flood clean-ups (e.g., flood fencing projects), or infrastructure damage (e.g., farm pads)	P		P
Increased deployment of flood fencing, where appropriate	• Linear feet of flood fencing installed	P	S	P

Chapter 6: Progress Reporting & Recommended Next Steps

Identifies efforts (planned or underway) to improve and update the plan in the future:

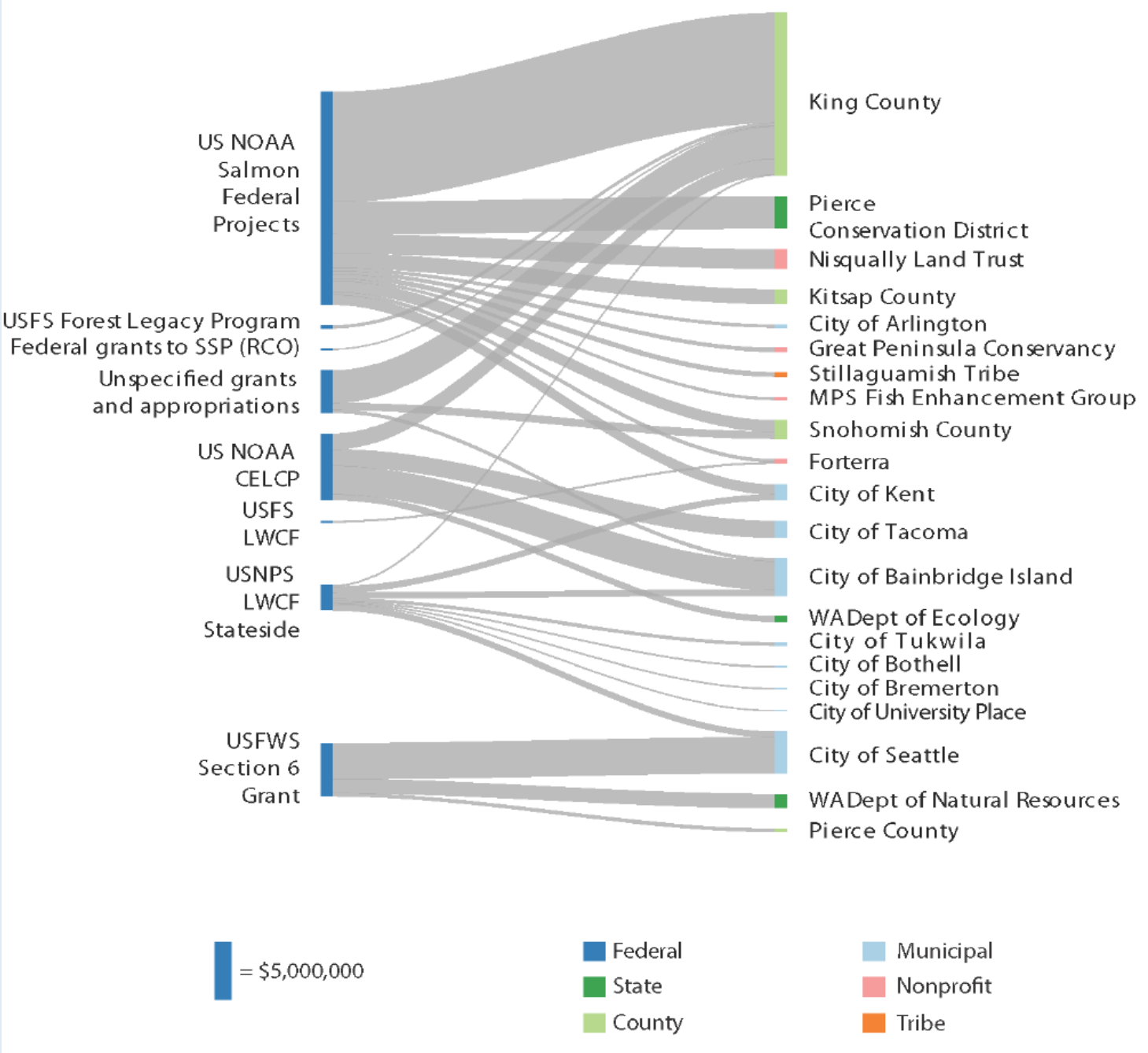
- Lower Sky river hydraulic study (underway)
- Lower Sky Geomorphic Assessment update (data now almost 10 years old)
- Skykomish River Flood Management Plan (1996 draft not finalized)
- Agricultural Survey Update (USDA update in 2017; data avail. 2018)
- Agriculture Resilience Plan Integration (SCD; underway)
- Funding Strategy

Funding Challenges

- Grant process = high transaction costs

- Funding sources are strongly stove-piped

- Need greater funding flexibility for multi-benefit project delivery



Source: Shadid et al., 2015, 44.

SLS Website www.snohomishcountywa.gov/SLS

Web map http://gismaps.snoco.org/slsmaps

- Please take a look at the plan and share your constructive thoughts ☺

SLS Priority Objectives

1. Regulatory Efficiency

(a) Streamlined Culvert Replacement Programmatic Permitting Demo

(b) 5-year Drainage Maintenance Permit Package

2. Reach-scale Plans

(a) Lower Skykomish

(b) Lower Stillaguamish

(c) Snohomish River & Estuary

3. Resource Land Protection

- Acquisitions, TDR/PDR

4. Ag Resilience Plan

(a) Ag Resilience Report

(b) PCC Farmland Trust Prioritization of farmland

5. Communications strategy

- **Thank you….**

Chinook redds, river mile 14, Skykomish River

photo courtesy of Brett Gaddis